DOCUMENT RESUME

ED 244 546 HE 017 249

AUTHOR Breslin, Richard D.
TITLE Coping with Computing Success.
PUB DATE Dec 83
NOTE 12p.; In: Information Resources and the Individual. Proceedings of the CAUSE National Conference (San Francisco, CA, December 11-14, 1983). Boulder, CO, CAUSE, 1984, p. 65-75. For the complete proceedings, see HE 017 245.
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Administrative Policy; *College Administration; *College Planning; Computer Literacy; *Computer Oriented Programs; *Computer Science Education; Databases; Higher Education; *Management Information Systems
IDENTIFIERS *Iona College NY

ABSTRACT

Elements of computing success of Iona College, the challenges it currently faces, and the strategies conceived to cope with future computing needs are discussed. The college has mandated computer literacy for students and offers nine degrees in the computerized information system/management information system areas. Since planning is needed in order to provide more service, equipment, and personnel while operating under tighter budget constraints, budgetary guidelines and priorities have been set that will enable the college to maintain its lead in computing, especially academic computing. The manner in which decisions have been made and their impact on the ability of the college to deliver both administrative and academic computing to campuses are detailed. The future oriented coping strategies outlined include: (1) The college will establish a creative forum for technological futures to identify, plan, and act upon innovative academic and administrative computing opportunities; (2) The college is also engaged in strategic and normative planning and will develop a growth model that includes computer support requirements for all academic programs; (3) Policies will be developed to specify mainframe usage and the role of personal computers within the computing environment; and (4) Faculty education in computing, software development, and interuniversity cooperation will continue to be supported by faculty enrichment funds. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED244546

Coping With Computing Success

Richard D. Breslin, Ph.D.
Academic Vice President
Iona College
New Rochelle, New York 10801

ABSTRACT

Iona College offers nine separate degrees in the CIS/MIS areas. Computer literacy has been mandated for all students. The College already possesses more than two million dollars worth of artifacts which it uses on both of its campuses. "The more you get the more you want" syndrome is already apparent. To capitalize on its current competitive advantage, the College must plan for even more service, more equipment and more personnel. It must do this with tighter budgets and severe competition for these dollars from other sectors of the collegiate community.

The College has planned to deal with the internal and external forces by setting budgetary guidelines and priorities which will enable the College to maintain its lead in computing, especially academic computing. This paper will detail what policies and priorities have been put in place. It will detail the manner in which decisions have been made and their impact on the ability of the College to deliver both administrative and academic computing to campuses which have developed insatiable appetites for computing.

While Iona has established a national reputation for its computing capability, the College faces current challenges and has conceived specific coping strategies for the future. This paper delineates the reasons the College has succeeded to date, the challenges it currently faces and the strategies conceived to cope with future computing needs. Iona's coping strategies can assist other institutions grappling with the multifarious issues associated with their campus computing environment.

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

[ ] This document has been reproduced as received from the person or organization originating it.
[✓] Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

CAUSE

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

IR 011 249

Paper presented at the
CAUSE National Conference
(San Francisco, CA, Dec. 11-14, 1983)

Coping With Computing Success

Richard D. Breslin, Ph.D.

INTRODUCTION

Iona College is a comprehensive, liberal arts college educating more than 6,000 students annually in curricular offerings at both the undergraduate and graduate levels. The college has immersed itself in information processing technology for years and its history, successful track record and commitment to computing have brought both regional and national recognition to Iona. (Iona's inclusion as the comprehensive liberal arts institution in the Inter-University Consortium for Educational Computing is an indication of the college's national stature in computing.)

ELEMENTS OF COMPUTING SUCCESS

Iona College has achieved institutional "computing success" because several critical elements are in place. Administrative and technological leadership has been sustained over a number of years; appropriate computing facilities exist, i.e., enough mainframe power to support thousands of users through many terminals placed throughout the campus. The College has the ability to network personal computers and dial up facilities for home computer users are available. Sufficient software capability is on line; adequate support personnel to develop new academic and administrative systems are on the staff. The institution provides user services (documentation, seminars, consultation for users with special needs, acquiring and/or developing and providing special software packages requested by users, et cetera). Well developed computer oriented curricula at both the undergraduate and graduate levels are offered; a computer literacy program for all students has been implemented, the faculty are committed to using

computing in their teaching and research activities at the College. These, then, are the critical components of "computing success" at Iona College.

Even though the institution possesses numerous computing strengths, it, nonetheless, faces current challenges. To meet these challenges it has conceived future oriented coping strategies to maintain the computing successes the College has enjoyed to date. It is clear to the institution that the strengths must be sustained, the challenges met and the coping strategies implemented to insure this continuing success. This paper details the strengths, challenges and future oriented coping strategies. The reader will note the extent to which these three elements are interrelated.

THE CURRENT ENVIRONMENT: STRENGTHS

Leadership, from the president, the academic vice president and vice president for finance, and from the director of the computer center, has been the critical factor in advancing computing at the institution. Stemming from this leadership has been an institutional commitment to computing, both academic and administrative. Iona College has manifested this commitment by the resources it has put into the hardware, software and personnel associated with information processing technology. Currently, computing consumes nearly 10% of the operating budget of the college.

The institution enjoys a sustained, established track record in computing. It began this process in 1966 and slowly but surely accelerated its involvement in computing by the acquisition of hardware and software, the hiring

of key personnel and the introduction of nine separate degree programs in computer related fields at both the undergraduate and graduate levels.

To foster this programmatic development, the college has expended its own funds through a faculty enrichment program designed to enhance the capabilities of our faculty in computing activities. The largest part of the $100,000 annual budget for faculty enrichment is driven to support such activities as tuition for those seeking degrees in computing, release time for study and curriculum development and the acquisition of personal computers, et cetera.

The philosophical underpinning of the College is its liberal arts tradition, and the institution has not wavered from the pursuit of its liberal arts heritage. However, it has recognized the necessity of wedding new technology to its liberal arts components. All students must study not only the traditional courses in the humanities and social sciences but also science, technology, mathematics and computers. It is also our basic philosophy that all disciplines, wherever appropriate, be taught from a computer based perspective. To foster this, the college has put in place a program entitled "Fellows in Science and Technology" wherein faculty outside of the science and computing disciplines become thoroughly involved in understanding matters germane to science, technology and computing. These faculty are responsible for introducing their newly acquired knowledge into courses they teach in their academic fields. Under these conditions, there is an environmental receptivity to computing. Information technology now permeates the community.

To support the educational programs, the computer center staff has developed innovative educational applications, for example, front end interactive preprocessors and mainframe look-alikes. Moreover, the staff has produced a series of high quality user publications which have proven to be a critical element in Iona's success. Iona's computer manuals deal with general systems, discipline and subject systems and programming languages. Additionally, the center has conceived an excellent long range master plan for computing activities. Nonetheless, a presidential task force is currently functioning to examine all computer related activities, functions and programs to plot out options and priorities for the future.

These strengths have generated a high visibility profile for the college as it has received both regional and national recognition for its achievements in and its commitment to computing. What has been done to date augers well for the future, but the successes have also generated a number of significant challenges.

THE CURRENT CHALLENGES

Computing is still labor intensive and the pressures to develop new programs, teach additional courses, provide new services and plan effectively for the future can produce both faculty and administrative burnout. There is a genuine danger of this occurring and means must be taken to relieve some of the pressures from the staff.

As successes occur and the academic community is even more "turned-on" to computing, the college is confronting the cry of "we want more": more

programs, courses, services, hardware, software. The number of users has reached more than 4000 and their usage has tripled within a brief time span. New tools are required for the user population and this virtually mandates new hirings. As computing infiltrates curricular areas hitherto non-computer based, the college sees the necessity of improving faculty computer education and sustaining its program of faculty enrichment to provide assistance for those preparing to meet the needs of the computer revolution. There is virtually an insatiable appetite that once whetted does not wish to be told that "enough is enough."

Environmental impact studies have become very important to the institution as there is clearly a ripple effect for any new computer related activity. Thus, the institution must find better ways to understand the total impact of new computing activities on such cost centers as the computing center itself, teaching faculty, plant and property, the library and communications systems.

The challenge of maintaining the college's financial commitment to computing with an expanding fiscal base and competing demands on limited resources remains a highly debated issue. Additionally, it is clear that additional software is required as well as documentation for new user services. Matching personnel resources to increased demands coming from a variety of institutional constituencies is an ever-present problem.

Strengths and success have led to significant challenges. While addressing the challenges of today, Iona must at the same time prepare for tomorrow. Not to do so can cripple institutional response not only to current events

but to those over the horizon. One thing remains constant: the future of computing is at one and the same time uncertain, promising and changing; the major current challenge is to provide for this uncertain future by building on strengths, responding to current challenges and developing future oriented coping strategies.

FUTURE ORIENTED COPING STRATEGIES

Iona has come to learn that planning is absolutely essential if current successes are to be maintained. This is particularly true of computing related activities because of the turbulence and constant change occurring in the field. To cope with modifications and changes in computing, Iona has deliberately looked to the future to implement an array of strategies that should enable the College to build on its present strengths and meet the challenges generated by the current computing and fiscal environment of the institution.

The strategies that the College is, and will be, implementing are numerous and most of them are not driven by new dollars. Considering that the College already spends a sizeable portion of its budget on computing, the institution recognizes that it cannot afford to supplement current computing expenditures with an infusion of significant new fiscal resources. While some of the strategies will call for some new resources, Iona has accepted the fact that "more money" cannot be the sole solution.

The college will establish a creative forum for technological futures. Stunning achievements have occurred in computing and the institution must

be prepared to identify, plan and act upon innovative academic and administrative computing opportunities. Concomitantly, the college is currently engaged in strategic and normative planning (in contradistinction to tactical and operational); it is through this intensive planning period that the institution will choose its own future and lay out the new pathways for computing at the college. It is clear that computing will be central to our future. Consequently, all of our planning must be both realistic and synchronized so that the entire institution will be moving together. Once the College has clearly established the shape of its chosen future, the next step will be to develop adequate implementation strategies.

It has become clear to the college that it must develop a growth model which includes computer support requirements for all academic programs. To this end, the institution will conduct an internal environmental impact study for any new academic program under consideration. In the past, this has been done informally; the future will call for much greater formality in this regard.

As the institution has experienced exponential growth in its computing activities, it has not fully addressed some policy related issues; it will need to do so in the near future. It must, for instance, confront the question of the degree of financial commitment it will make to information processing technology. What percentage of its annual operating budget the College will expend on this technology and associated personnel remains an unanswered question, and one which must be resolved. A presidential task force is currently working on numerous issues associated with computing,

and it will be the task force's responsibility to produce a series of computing related recommendations, including a percentage cap on computing expenditures.

Other policies that will have to be clarified must include a statement on mainframe usage (who can use it for what) and the role of personal computers within the computing environment. Greater emphasis will have to be placed on personal computer ownership, and the college will need to address the degree to which it will continue to support the acquisition of personal computers for faculty, administrators, staff and students. To date, the College has established strong communications networks. These will have to be enhanced as additional personal computers are added to the computing environment. The philosophy concerning this is that "everything must connect." The institution uses one purchasing agent for all computing acquisitions, and it will not modify this procedure.

The college has already learned the value of a wise use of its faculty enrichment funds; the institution, for the foreseeable future, will continue to drive funds to support faculty education in computing. Slowly but surely the college is transforming its learning environment through science, technology and computers, and the institution's program of "Fellows in Science and Technology" will be enhanced and enriched to buttress faculty awareness and education in information processing technology. Moreover, the institution will augment its current computer degree offerings by adding such degree programs as Technology Management (M.S.), Educational Computing (Ed.D.) and Telematics (B.A., M.A.).

To sustain the computing environment, both academically and administratively, the institution will commit itself both to the development and the acquisition of additional appropriate software. Additional innovative educational applications, similar to the mainframe look-alikes and front end interactive preprocessors, are examples of this activity. The primary reason for this will be the enhancement of our educational processes.

Because of its participation in the Inter-University Consortium for Educational Computing, Iona has committed itself to the development of educational software for the "high end" machine. The characteristics of this target machine are: one million bytes of memory; one million instructions per second; 1000 x 1000 pixel display; 32 bit architecture with virtual memory; high bandwidth communication between work stations; and bit mapped display capability. The software designed by Iona and other members of the consortium must be able to run on the target machine, and all software developed will be shared by consortium members.

It makes sense for institutions within and without the consortium to cooperate with each other, and Iona has committed itself to such cooperation as an institutional policy.

The college also recognizes the need to broaden its services to the community so that, to the extent possible, it can expand the community's understanding of this new technology. Concomitantly, the institution must also have a further reach out capacity to the corporate and foundation sectors through a high technology development officer. Funding is available, and this should be sought by someone with expertise in the field.

Additionally, the College must link all information centers, and this eventually will call for an organizational restructuring. Some additional personnel will have to be added to the staff and this will provide the opportunity for functional delineation of current and future personnel. At the same time, the college will attempt to reallocate faculty to academic computing activities. The end product of this should be the augmentation of user publications. User publications and technical bulletins will continue to play a pivotal part in Iona's computing success. Moreover, the college will need to upgrade and add additional hardware and move towards a paperless campus for information.

The future will produce multiple forces competing for limited resources. Within each camp there will be those who foster the mentality of "the more you get, the more you want" versus the mentality of "enough is enough." How much is enough may spell the difference between adequacy, obsolescence and state of the art. To the extent possible, Iona wishes to be at the state of the art. However, the institution clearly recognizes that it is only with strong commitment, sound policy formulation and adequate implementation strategies that it can be truly vibrant and hopeful of continued computing success.

The future oriented coping strategies outlined in this paper represent the institution's commitment to move forward and not be satisfied with previous successes. Within this context the overall future coping strategy will be that of flexibility so that the college can respond effectively to the various opportunities and challenges which will lie immediately ahead.